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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,673	02/14/2000	Meenarachagan Vishnu	FORE-54	7017

7590 03/12/2003

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EXAMINER

TRAN, THIEN D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/503,673

Applicant(s)

VISHNU, MEENARACHAGAN

Examiner

Thien D Tran

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 16-20, 26, 33-35 are rejected under 35 U.S.C. 102(b) as being participated by Holden et al (U.S Patent No. 6,449,274 B1).

Regarding claims 1, 16, Holden discloses a scheduler for a server comprising:

a WAC switching level (first level generator) associated with groups of connections (col.10 lines 40-65, col.12 lines 45-65, col.17 lines 10-65); and

a ORT level (second level generator) associated with connections corresponding to the groups of connections, said first level generator identifying which connections in the second level generator corresponds to a group in the first level generator that are to be considered for service (col.21 lines 20-65), said second level generator identifies the connections corresponding to the group to receive service from the server, said second level generator in connection with said first level generator. See col.18 lines 35-65, figures 2 and 5.

Regarding claims 2, 17, Holden discloses a first level filter mechanism which filters out inactive groups of connections, said first level filter mechanism connected to the first level generator and the second level generator. See col.16 lines 63-67.

Regarding claims 3, 18, Holden discloses a second level filter mechanism, which filters out inactive connections, said second level filter mechanism connected to the second level generator. See col.17 lines 1-15.

Regarding claims 4, 19, Holden discloses an IRT level (zero level generator), figure 2, associated with groups corresponding with groups, said zero level generator in connection with the first level generator, said zero level generator identifying which groups in the first level generator correspond to a group in the zero level generator that are considered for service. See col.11 lines 50-67.

Regarding claims 5, 20, Holden discloses a zero level filter mechanism, which filters out inactive groups, said zero level filter mechanism connected to the zero level generator and the first level generator. See col.10 lines 15-50.

Regarding claims 26, 33-35, Holden discloses an apparatus for serving connections comprising:

- a server;

- a memory in which data of the connections is stored, said memory connected to the server; and

- a hierarchical scheduler which schedules when the data of the connections in the memory is to receive service from the server, said scheduler connected to said server and said memory. See figure 5, col.11 lines 50-65.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-15, 21-25, 27-32, 36-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Holden et al (U.S Patent No. 6,449,274 B1) in the view of Lahat et al (U.S Patent No. 6,417,944).

Regarding claim 6, 24, Holden discloses that the zero level generator includes a zero level generator which generates a zero level schedule, which indicates the group to be scheduled for service, the first level generator includes a first level bitmap generator which indicates the group to be scheduled for service, and the second level generator includes a second level generator which generates a second level schedule which indicates the connections to be scheduled for service. See figure 8, col.21 lines 20-50.

Regarding claims 7, Holden discloses that the zero level, first level and second level filter mechanism includes a zero level filter encoder, first level filter encoder and second level filter encoder, respectively, which filters out inactive groups from the zero level schedule and encodes the zero level schedule with inactive supergroups removed, which filters out inactive groups from the first level schedule and encodes the first level schedule with inactive groups removed, and which filters out inactive connections from

the second level schedule and encodes the second level schedule with inactive connections removed, respectively. See col.16 lines 45-65.

Regarding claim 8, Holden discloses an interface which maintains a zero level active, a first level active and a second level active having only active connections corresponding to the zero level schedule, first level schedule and second level schedule, respectively. See col.15 lines 20-40.

Regarding claims 9, 21-23, 36, Holden discloses that the zero level filter encoder reads the zero level schedule and ANDS it with the zero level active to filter out inactive groups, the first level filter encoder reads the first level schedule and ANDS it with the first level active to filter out inactive groups, and the second level filter encoder reads the second level schedule and ANDS it with the second level active bitmap to filter out inactive groups. See col.10 lines 15-45.

Regarding claim 10, 28, 29, 37, Holden discloses that the zero level generator, first level generator and second level generator dynamically generates bits for each group, group and connection, respectively. See col.14 lines 1-65.

Regarding claims 11, 25, 27, Holden discloses that the zero level generator includes a counter for each group which is decremented as a function of an intercell interval, wherein the intercell interval is the time it takes for the server to service a cell, the first level generator includes a counter for each group which is decremented as a function of the intercell interval, and the second level generator includes a counter for each connection which is decremented as a function of the intercell interval. See col.5 lines 60-67.

Regarding claim 12, 30, 32, Holden discloses that the zero level generator sets a bit for a group whose counter decrements to zero, the first level generator sets, a bit for a group whose counter decrements to zero, and the second level generator sets a bit for a connection whose counter decrements to zero. See col.5 lines 60-67.

Regarding claims 13, 31, 38, Holden discloses that the zero level generator, first level generator and second level generator each include a rate limiting counter associated with each counter, wherein the bit for the group, group or connection, respectively, is set whenever both the counter and the corresponding rate limiting counter decrements to zero. See col.11 lines 15-30.

Regarding claim 14, Holden discloses that the zero level bitmap generator, first level generator and second level generator each generate a guaranteed rate for groups, groups and connections, respectively, which receive service before any other groups, groups or connections, respectively, in the respective schedule. See col.9 lines 10-45.

Regarding claim 15, Holden discloses that the zero level generator, first level generator and second level generator proportionately reduce the service to each group, group and connection, respectively, when overbooking occurs and when total bandwidth is less than the line rate. See col.22 lines 30-65.

Holden does not disclose that bitmap generator for generating schedule bitmap indicating the group to be scheduled for service, which would have been well known method for generating data bits in communication encoder.

Lahat, for example, discloses a generator for generating bitmap so that data can be composed by number of bits in a proper form for communication. See col.10 lines 1-20.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Sreenan (US Patent No. 5,742,772) discloses resource management system of broadband multiport bridge.

-Masuda et al (US Patent No. 6,314,098 B1) discloses ATM connectionless communication system having session supervising and connection supervising functions.

-Fowler et al (US Patent No. 6,504,819 B2) discloses classes of service in an MPOA network.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

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A handwritten signature in black ink, appearing to read 'Alpus H. Hsu'.

Thien Tran

ALPUS H. HSU
PRIMARY EXAMINER